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Paris (75014)

fredo123aaa.github.io

07 80 83 24 03

Languages

Spanish
Native language

English
- C1

French
- C1

Technical Skills

Data & Machine Learning
Pandas, Numpy, SciPy, Scikit-Learn, TensorFlow, Keras, PyTorch, Jupyter, SQL

Programming
Python, R, JavaScript, TypeScript, Java

Data Engineering
PostgreSQL, MySQL, Oracle, MongoDB, ETL, APIs

Cloud & DevOps
AWS, Google Cloud, Azure, Docker

AI / MLOps
Databricks, Azure AI, Cognitive Search, Azure OpenAI

Web & Automation
FastAPI, Django, REST, GraphQL, Selenium, Playwright

Honors and Awards

Eiffel Scholarship for academic excellence (Sep 2024)

Salazar Scholarship (Sep 2024)

1st place in Department and 3rd in Faculty (2021-2024)

"Permanence" Scholarship for academic excellence (2021-2024)

Volunteering

IEEE ComSoc dissemination
Events assistant and organizer in UNI (Peru).

UN calls system
UN surveys by telephone call to immigrants

ALEJOS ARRIETA Fredo

Master's in Data Science Student

Master's student at Institut Polytechnique de Paris (IPP) in Data Science and AI, graduating in 2026 with a degree in Data Science and Applied Maths. I am currently seeking a 6-month end-of-studies internship starting in early 2026.

Diplomas and Training

Master in Data Science, Applied Maths and Statistics - Bac +5

From September 2025 to June 2026 École Polytechnique - IP Paris Palaiseau, France

- **First French Engineering School**

Generative AI, Reinforcement Learning, Computer Vision, Big Data & Data Streams, Time Series, Self-Supervised Learning, Transformers (LLMs/RAG)

Diplôme d'Ingénieur (Data Science, Artificial Intelligence) - Bac +5

From September 2024 to June 2026 Telecom Paris - IP Paris Palaiseau, France

- **France's top-ranked school for computer science and digital technology**

GPA 4 Machine Learning, Optimization, Econometrics & Markets, Data Analysis & Visualization, Deep Learning, Research Methods

Computer Science, Telecommunications - Bac +5

From March 2020 to July 2024 Universidad Nacional de Ingeniería Lima, LR, Peru

- **Ranked 1st in Peru for research and patents number**

GPA 4 Software Technologies, Neural Networks, Linear Algebra, Statistics, Network Systems

Projects

Model Distillation and Retrieval Augmented Generation (RAG) Pipeline Implementation

December 2025 École Polytechnique Palaiseau

- Reduced model size by 14x (7B→0.5B) via white-box distillation, specializing it for RAG tasks.
- Built a RAG pipeline from scratch, processing 1,000+ Wikipedia articles into 8,940 semantic chunks for accurate, context-grounded answers.
- PyTorch, Transformers, Hugging Face, Knowledge Distillation, Vector Databases (ChromaDB), RAG, vLLM, Python

Extended Vector Quantisation Models for Robust MRI Segmentation

From October 2025 to November 2025 Telecom Paris Palaiseau

- Trained and evaluated a VQ-UNet model to automate 3D prostate MRI segmentation, achieving a Dice score of 0.7 for the whole gland and reducing the Hausdorff Distance (HD) by 15% compared to baseline models, demonstrating improved anatomical consistency.
- Computer Vision, Deep Learning, Numpy, Python, Pandas, Torch, CUDA.

Neural Machine Translation and Language Modeling

September 2025 École Polytechnique Paris, France

- Implemented a seq2seq model with global attention for English-to-French translation, training on over 136,000 sentence pairs, achieving model's training loss reduction by 60% across 20 epochs.
- Python, PyTorch, NLP libraries (NLTK), RNNs, GRUs, attention mechanisms.

Handwritten Digit Classification and Autoencoder implementation

April 2025 Telecom Paris Paris, France

- Developed a neural network from scratch using NumPy, achieving 87% accuracy in digit classification, and built a linear autoencoder with Keras that produced latent features comparable to PCA components.
- Neural Networks, Linear Algebra, Keras, TensorFlow, scikit-learn, Auto Encoders, Unsupervised Representation Learning.

Work Experience

Software Developer Intern for Attribute Based Encryption Research

From June 2023 to December 2023 INICTEL (UNI) Lima, LR, Peru

- Researched and implemented Attribute-Based Encryption (ABE) on IoT devices, integrating key servers and encryption methods to achieve a 50% reduction in cryptographic data.
- Linux, Linear Algebra, Python, number theory, optimization.